

### **DETAILED ACTION**

1. Claims 1-16 are presented for examination.

#### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- a. The following terms are not clearly understood:

- i. Claim 1 lines 4-6 recite, "generating a credential map for each credential associated with the request, the credential map comprising a first type of resource mapping and a second type of resource mapping to yield generated credential maps". It is unclear whether each credential map includes a first and second type of resource mapping *or* whether the first and second resource mapping correspond to each of the credentials associated with the request. Lines 4-6 recite, "the credential map comprising ... to yield generated credential maps." It is unclear how the credential maps, which simply comprises elements can generate (yield) the generated credential maps.
- ii. Claims 15 and 16 are rejected for the same reasons as claim 1.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3-5, and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johansson et al. (US Pat No. 6,466,559).

4. Regarding claim 1, Johansson teaches a method of processing a request for resources within a compute environment comprising a plurality of interconnected compute nodes under common management (col 1 lines 54-67), the method comprising:

receiving the request for resources in the compute environment to be consumed for a job (col 2 lines 10-15);

determining a first type of resource mapping and a second type of resource mapping (col 3 lines 41-45, wherein software and hardware resource are listed out or mapped from the request);

generating a resource availability map (col 3 lines 24-28; col 4 lines 36-39, wherein the data structure maps available resources);

generating a first composite intersecting map that intersects the resource availability map with the first type of resource mapping of all the generated credential

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maps (col 5 lines 11-23; wherein each row in the matrix maps available resource units of the first type, therefore each row is a first composite intersecting map that intersects resource availability with a first type of resources);

generating a second composite intersecting map that intersects the resource availability map with the second type of resource mapping of all the generated credential maps (col 5 lines 11-23; wherein each column in the matrix maps available resource units of the second type, therefore each column is a second composite intersecting map that intersects resource availability with a second type of resources);

allocating resources within the compute environment for the request based on at least one of the first composite intersecting map and the second composite intersecting map (col 5 lines 24-28).

5. Johansson does not explicitly teach generating a credential map for each credential associated with the request, the credential map to yield generated credential maps.

6. A map is generally defined as “any representation of the structure of an object” (Microsoft Computer Dictionary, 5<sup>th</sup> Edition, 2002). Therefore, it would have been obvious to one of ordinary skill that a listing out of resource requirements is analogous to a credential map by representing elements of the request.

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7. Regarding claim 3, Johansson teaches that the request is a request for one of a job or a reservation (col 2 lines 10-15, wherein the request requires resources for data processing job).

8. Regarding claims 4-5, Johansson teaches that the request further comprises at least one credential, wherein the at least one credential comprises at least one of: a user, a group, a number of processors, a number of jobs, a quality of service, a number of nodes, a bandwidth, licensing availability, a time frame and a cost (col 3 lines 41-45, wherein the request indicates or “maps” how may resources are needed to satisfy the request is created).

9. Regarding claim 15-16, they are the system and medium claims of claim 1 above. Therefore they are rejected for the same reasons as claim 1 above.

10. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Johansson et al. (US Pat No. 6,466,559) in view of Brown (US PG Pub No. US 2005/0149370 A1).

11. Regarding claim 6, Johansson does not teach that each credential map is time-based.

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12. Brown teaches defining temporal relationships between tasks ([0009]). It would have been obvious to one of ordinary skill in the art at the time of the invention to teach that each credential map is time-based. Brown teaches that arranging tasks in a temporal arrangement significantly improves comprehensibility ([0009]).

### ***Response to Arguments***

13. Applicant's arguments with respect to claims 1-16 have been considered but are moot in view of the new ground(s) of rejection.

### ***Allowable Subject Matter***

14. Claims 2 and 7-14 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ERIC C. WAI whose telephone number is (571)270-1012. The examiner can normally be reached on Mon-Fri, 9am-5pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng - Ai An can be reached on 571-272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/Eric C Wai/  
Examiner, Art Unit 2195

/Meng-Ai An/

Supervisory Patent Examiner, Art Unit 2195